least 5 contiguous amino acids of the C-terminal end of SEQ ID NO:1 or derivatives thereof, wherein said derivatives comprises fragments and amino acid substitutions, insertions or deletions of said LHRH.

3. (Amended) The composition according to claim 1 or 2 wherein said LHRH is the amino acid sequence of SEQ ID NO:2.

4. (Amended) The composition according to claim 1 or 2 wherein said LHRH is the amino acid sequence of SEQ ID NO:4.

5. (Twice Amended) A pharmaceutical composition comprising a LHRH-conjugated to diphtheria toxoid and adsorbed to an ionic polysaccharide together with one or more pharmaceutically acceptable carriers and/or diluents wherein said LHRH is an amino acid sequence of at least 5 contiguous amino acids, of the C-terminal end of SEQ ID NO:1 or derivatives thereof, wherein said derivatives comprises fragments and amino acid substitutions, insertions or deletions of said LHRH.

7. (Amended) The pharmaceutical composition according to claims 5 or 6 wherein said LHRH is the amino acid sequence of SEQ ID NO:2.

8. (Amended) The pharmaceutical composition according to claims 5 or 6 wherein said LHRH is the amino acid sequence of SEQ ID NO:4.

Kindly add the following new claims:

62. (New) The composition according to claims 1 or 2, wherein said LHRH is the amino acid sequence of SEQ ID NO:1.

63. (New) The composition according to claims 1 or 2, wherein said LHRH is the amino acid sequence of SEQ ID NO:3.

64. (New) The pharmaceutical composition according to claims 5 or 6, wherein said LHRH is the amino acid sequence of SEQ ID NO:1.

65. (New) The pharmaceutical composition according to claims 5 or 6, wherein said LHRH is the amino acid sequence of SEQ ID NO:3.

66. (New) A composition that induces an LHRH immune response comprising an LHRH component conjugated to diphtheria toxoid and adsorbed to an ionic polysaccharide, wherein said LHRH is up to 10 amino acids in length and comprises at its C-terminal end 5 contiguous amino acids of the C-terminal end of SEQ ID NO:1, and wherein said immune response is an antibody response.

67. (New) The composition according to claim 66 wherein said ionic polysaccharide is DEAE-dextran.

68. (New) The composition according to claims 66 or 67 wherein said LHRH is the amino acid sequence of SEQ ID NO:1.

69. (New) The composition according to claims 66 or 67 wherein said LHRH is the amino acid sequence of SEQ ID NO:2.

70. (New) The composition according to claims 66 or 67 wherein said LHRH is the amino acid sequence of SEQ ID NO:3.

71. (New) The composition according to claims 66 or 67 wherein said LHRH is the amino acid sequence of SEQ ID NO:4.

72. (New) A pharmaceutical composition that induces an LHRH immune response comprising LHRH conjugated to diphtheria toxoid and adsorbed to an ionic polysaccharide wherein said LHRH is up to 10 amino acids in length and comprises as its C-terminal end the 5 contiguous amino acids of the C-terminal end of SEQ ID NO:1 and wherein said immune response is an antibody response.

73. (New) The pharmaceutical composition according to claims 72 wherein said ionic polysaccharide is DEAE-dextran.

74. (New) The pharmaceutical composition according to claims 72 or 73 wherein said LHRH is the amino acid sequence of SEQ ID NO:1.

75. (New) The pharmaceutical composition according to claims 72 or 73 wherein said LHRH is the amino acid sequence of SEQ ID NO:2.

76. (New) The pharmaceutical composition according to claims 72 or 73 wherein said LHRH is the amino acid sequence of SEQ ID NO:3.

77. (New) The pharmaceutical composition according to claims 72 or 73 wherein said LHRH is the amino acid sequence of SEQ ID NO:4.

78. (New) A composition for use in eliciting an effective immune response to LHRH said composition comprising a LHRH- conjugated to diphtheria toxoid and adsorbed to an ionic polysaccharide wherein said LHRH is an amino acid sequence of at least 5 contiguous amino acids of the C-terminal end of SEQ ID NO:1.

79. (New) A pharmaceutical composition comprising a LHRH- conjugated to diphtheria toxoid and adsorbed to an ionic polysaccharide together with one or more pharmaceutically acceptable carriers and/or diluents, wherein said LHRH is an amino acid sequence of at least 5 contiguous amino acids of the C-terminal end of SEQ ID NO:1.

80. (New) The composition of claim 1, wherein said LHRH derivative comprises spacers introduced at the N-terminus.

81. (New) The composition of claim 5, wherein said LHRH derivative comprises spacers introduced at the N-terminus.

82. (New) The composition of claim 1, wherein said LHRH derivative comprises at least one amino acid substitution according to table I.

83. (New) The composition of claim 5, wherein said LHRH derivative comprises at least one amino acid substitution according to table I.

REMARKS

Introduction

Receipt is acknowledged of a final office action dated December 18, 2002. In the action, the examiner rejected claims 1-8 for allegedly failing to meet the written description and enablement requirements and for obviousness reasons.

Status of the Claims

In this response, applicants amended claims 1, 3-5 and 7-8, and added new claims 62-83. Support for the amended claims 1, 3-5 and 7-8 can be found on page 1, 1st paragraph,